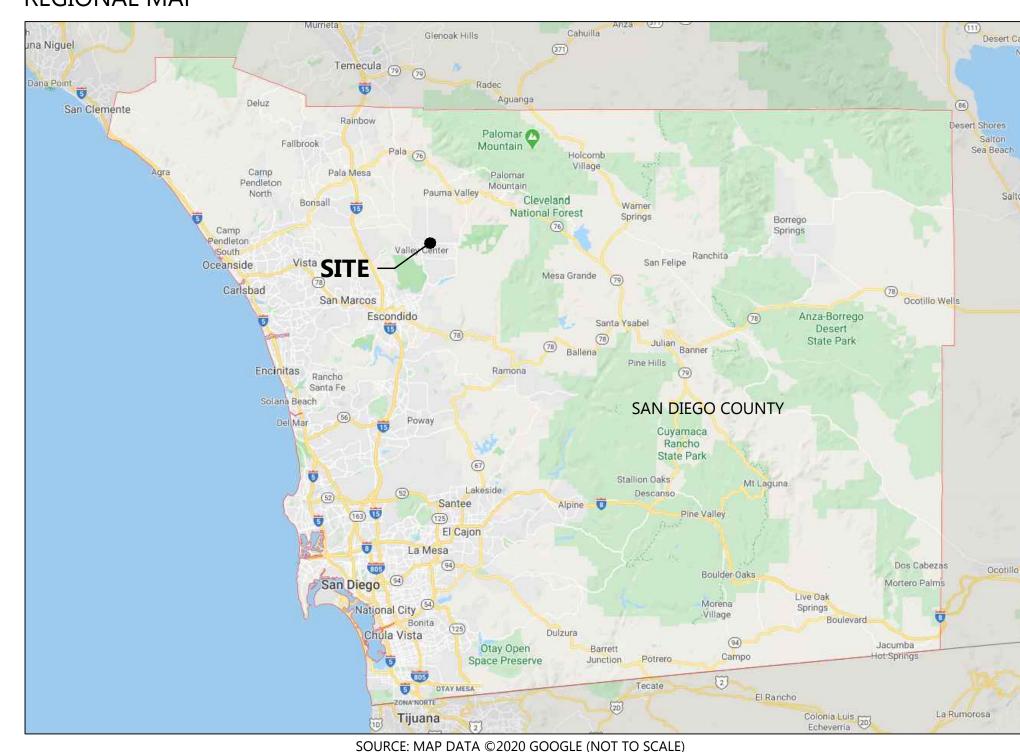
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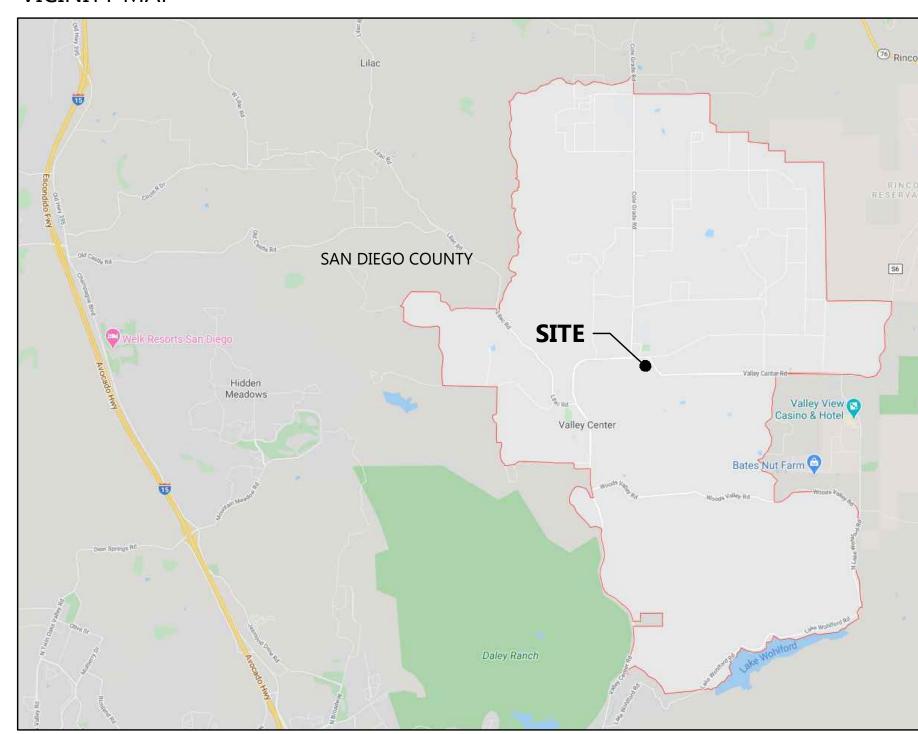
San Diego County, California

Site Plan & Civil Grading Plans

REGIONAL MAP



VICINITY MAP



SOURCE: MAP DATA ©2020 GOOGLE (NOT TO SCALE)

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PREPARED FOR

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REVISIONS:

DATE COMMENT

A 04/24/20 Issued for Drainage Review

B 04/30/20 For SWQMP Submittal

C 06/08/20 Issued to Address County Review Comments

Valley Center Storage Project

San Diego County, California

Sheet List Table

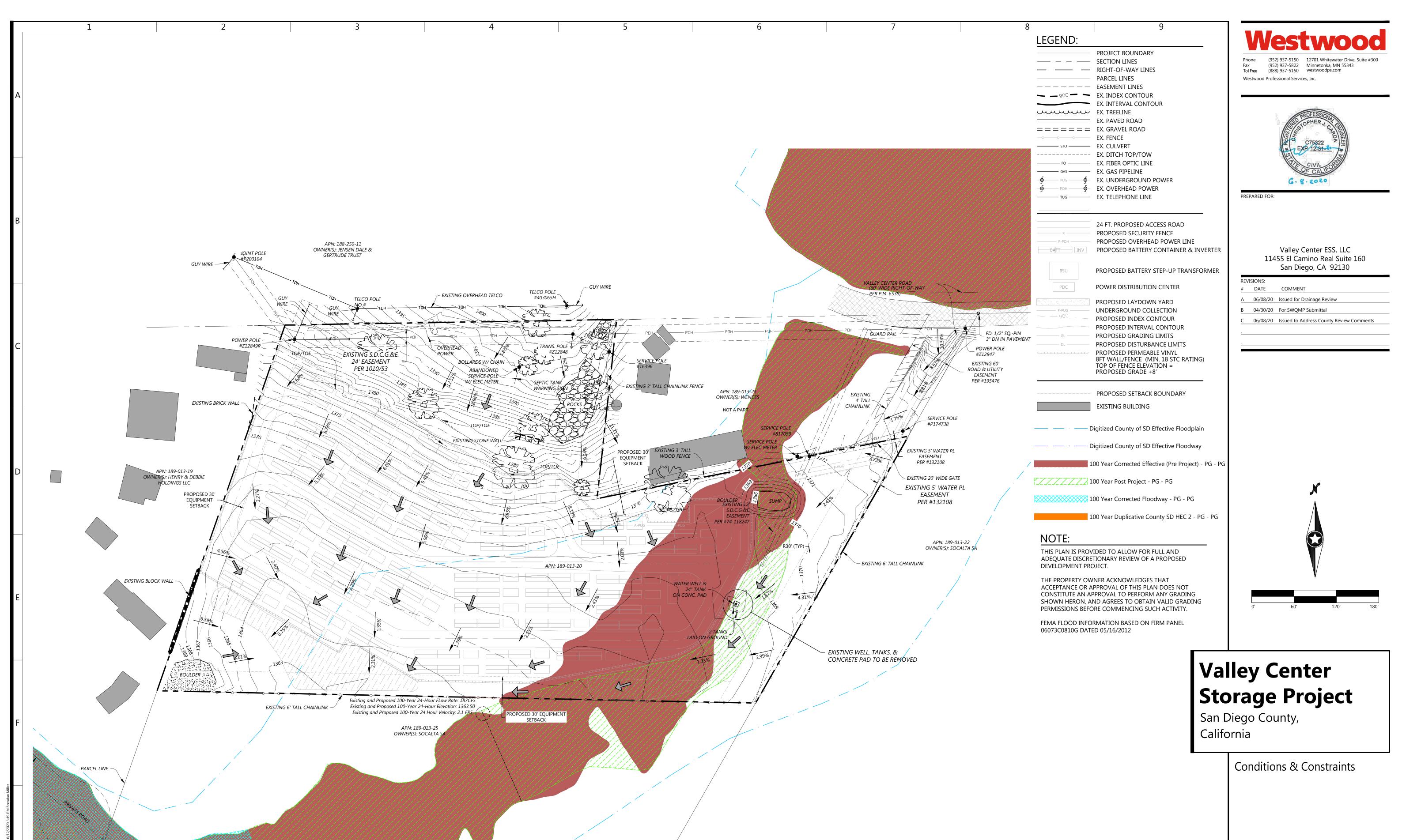
Conditions & Constraints

Site Plan
Grading Plan
Erosion Control Plar

Cover

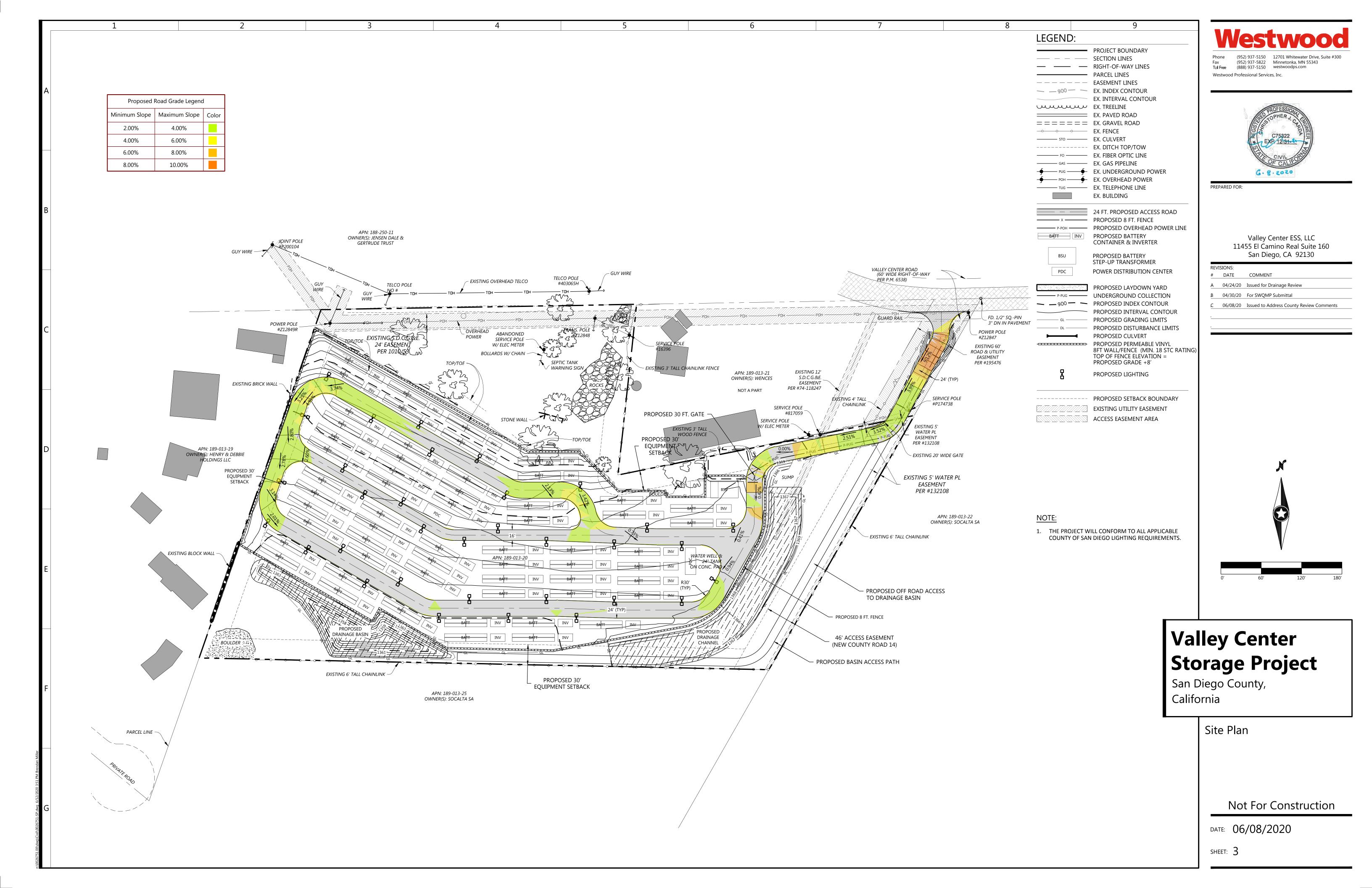
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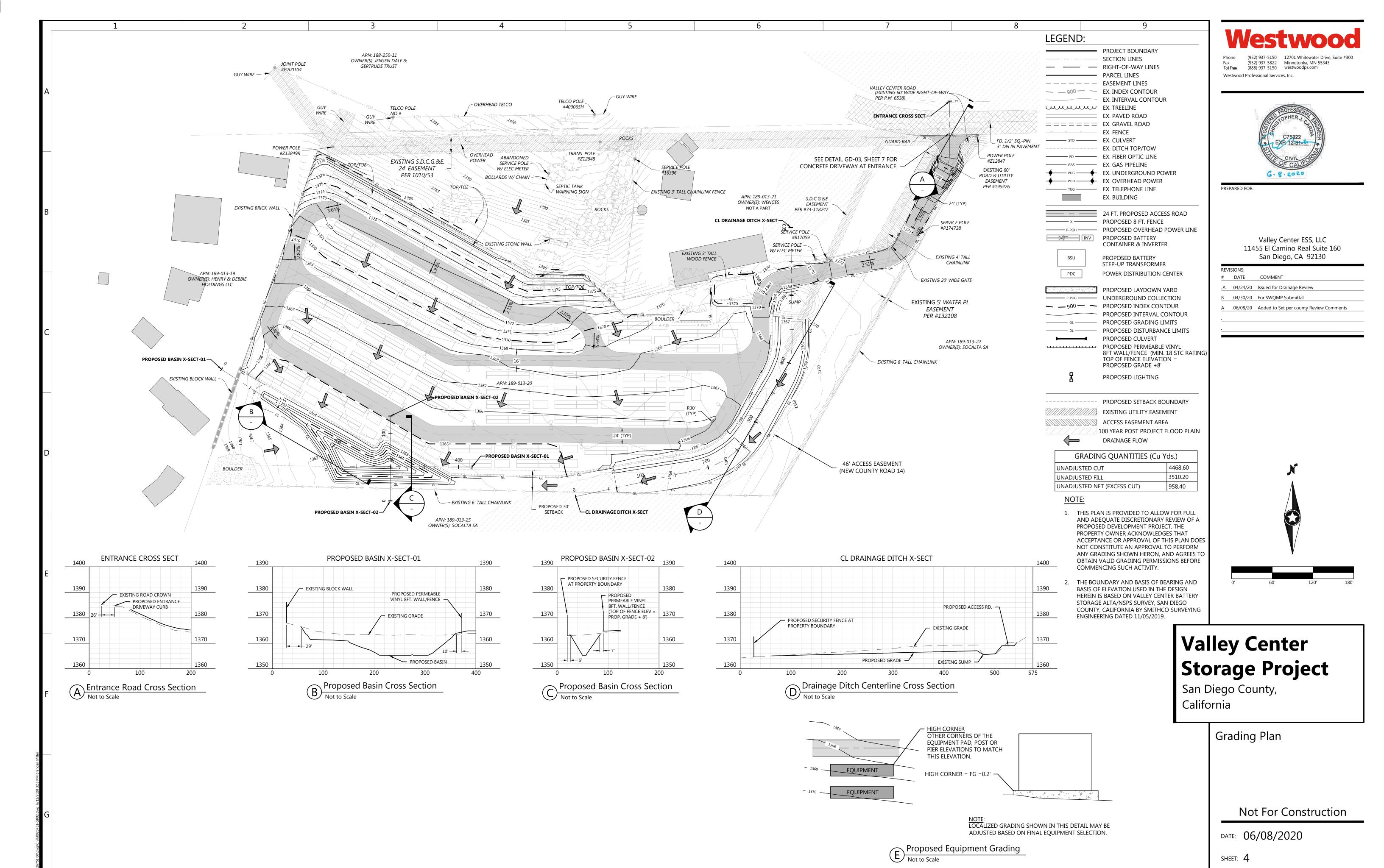
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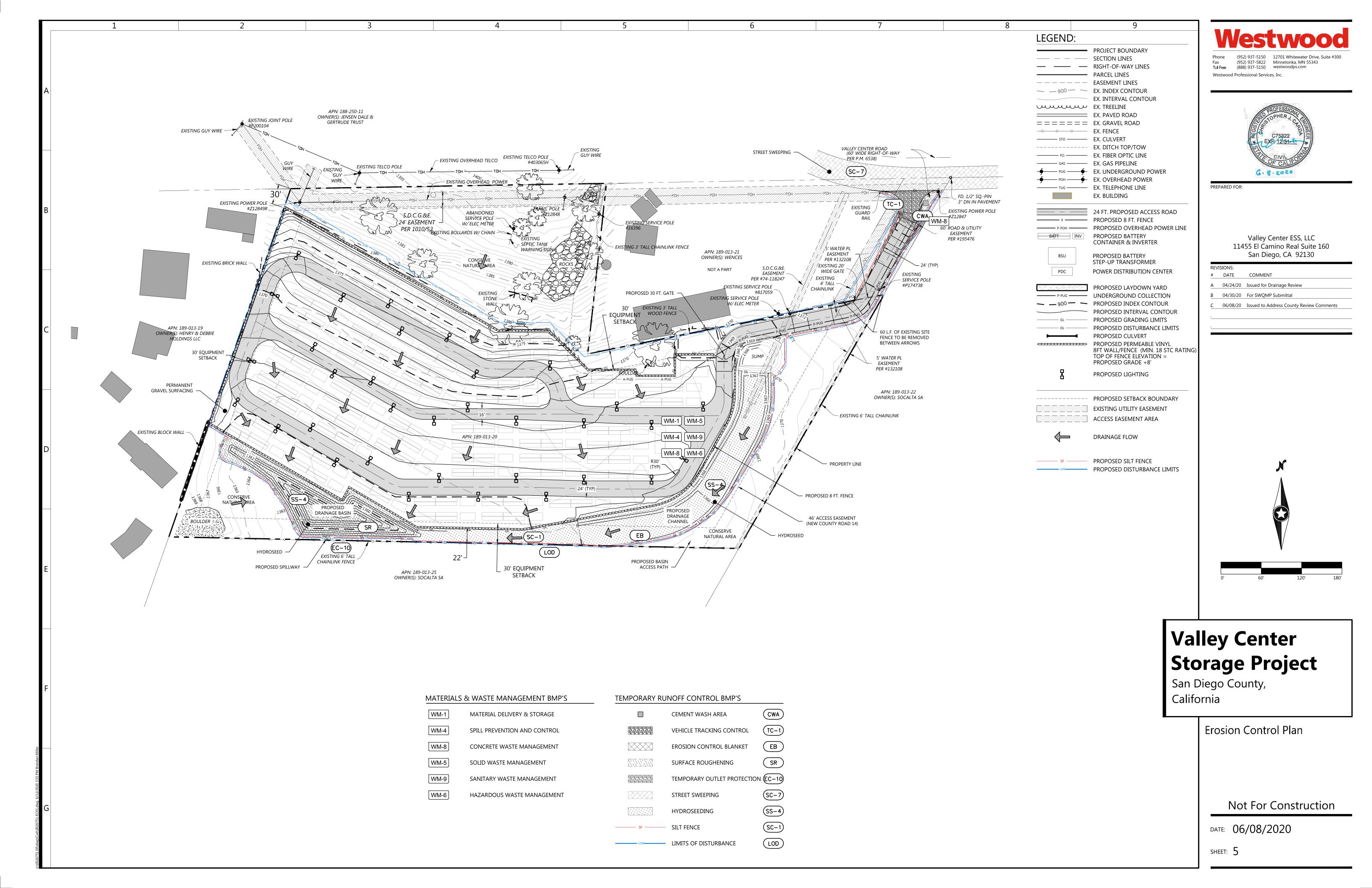


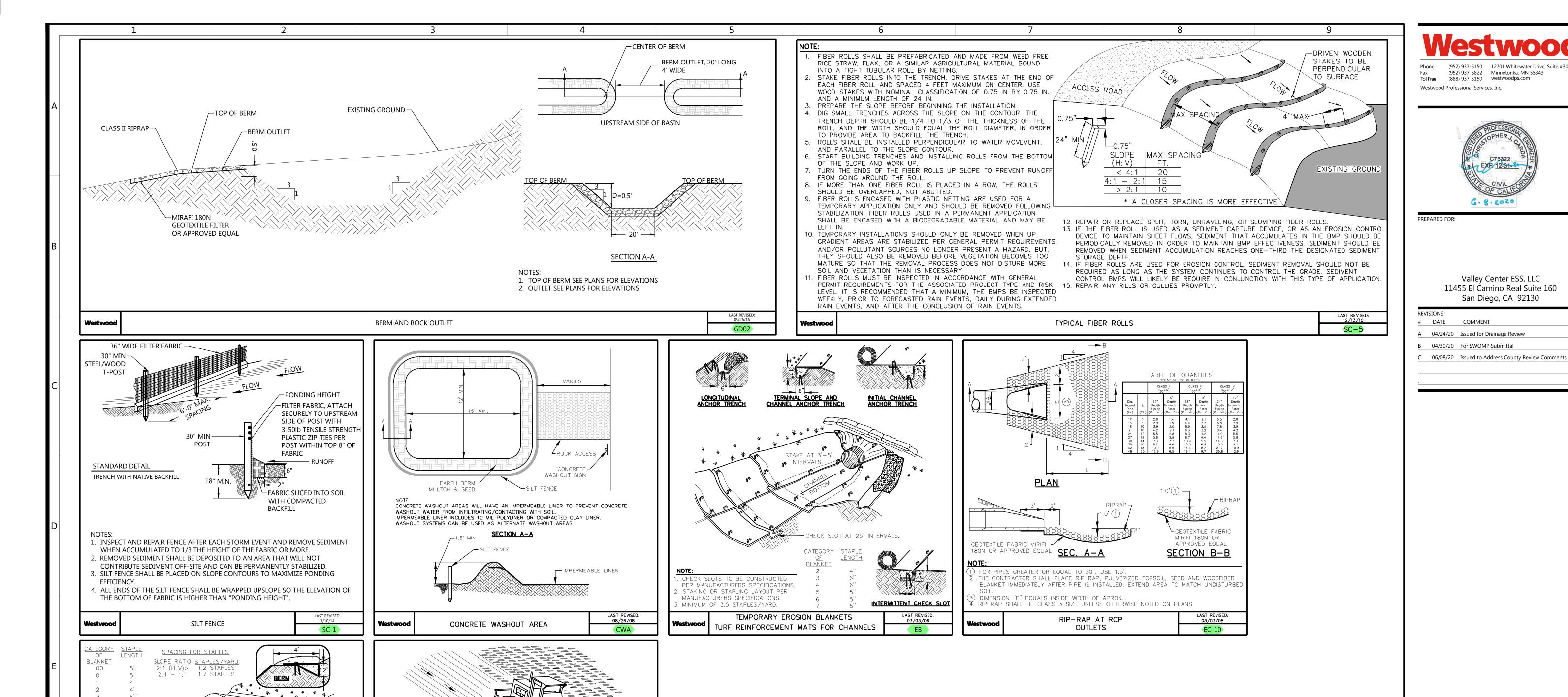
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MAXIMUM

TEMPORARY CONTOUR FURROWS

GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF RATE.

LAST REVISED: 03/03/08

USE SLOPE TRACKING FOR SLOPES 4:1 AND 50 FEET LONG OR STEEPER/LONGER.

USE TEMPORARY CONTOUR FURROWS FOR SLOPES 3:1 AND 75 FEET LOND OR

SURFACE ROUGHENING

FOR ALL SLOPES GREATER THAN 4:1

STEEPER/LONGER.

TYPICAL SLOPE

SOIL STABILIZATION

5. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT. -. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE

MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.

DO NOT STRETCH.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICK AND GRASS.

TEMPORARY EROSION BLANKETS

TURF REINFORCEMENT MATS FOR SLOPES

NON-WOVEN GEOTEXTILE

FILTER FABRIC UNDER

LAST REVISED: 03/03/08

TYPICAL TREATMENT
WET SLOPE LINING

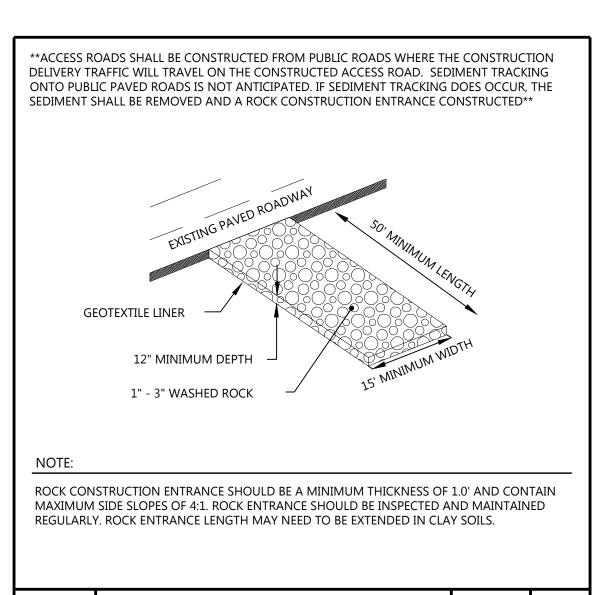
Valley Center Storage Project

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ROCK CONSTRUCTION ENTRANCE

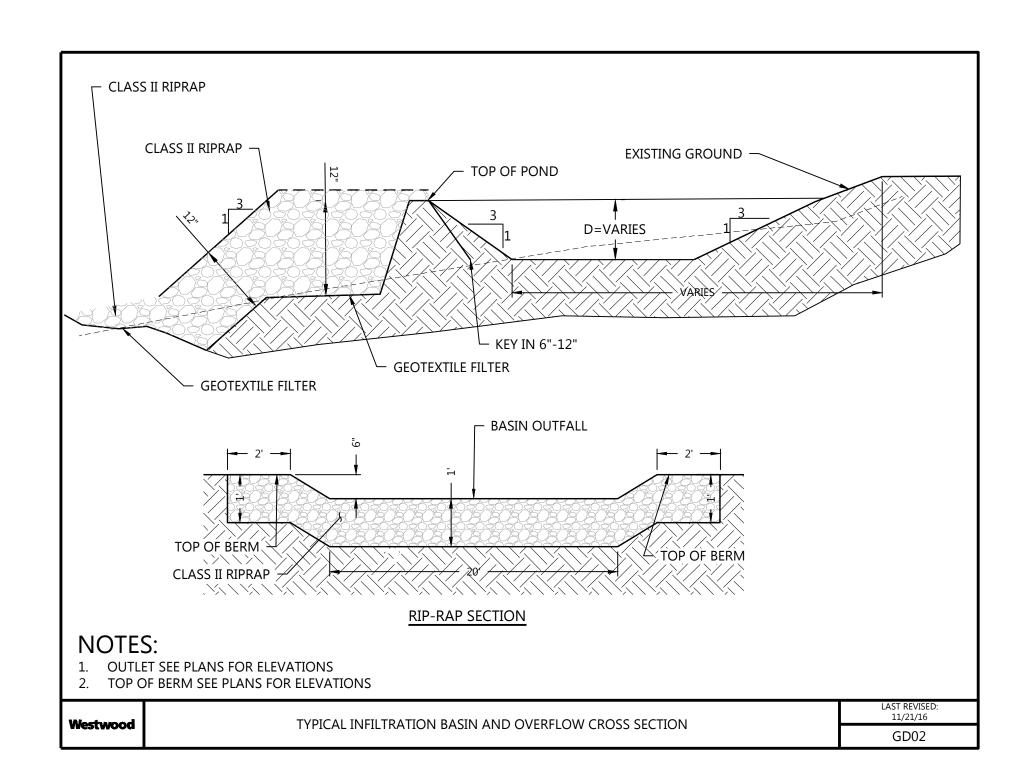
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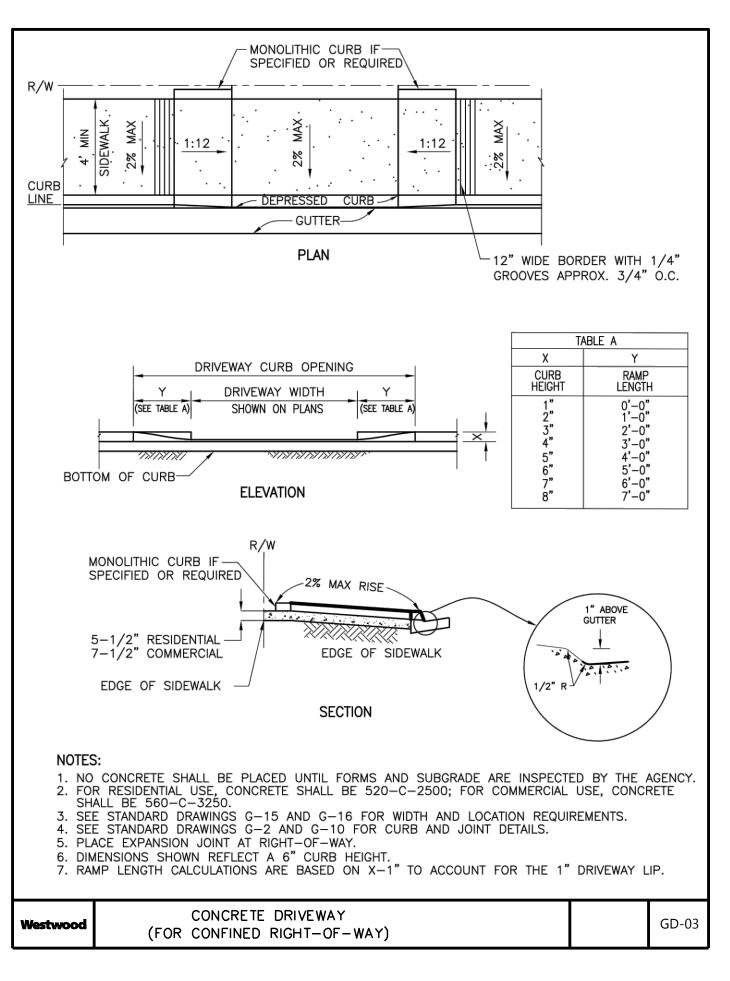
4/13/16

GRADING NOTES

- 1. ALL GRADING SHALL CONFORM TO KERN COUNTY GRADING CODE AND STANDARDS PERTAINING THERETO AS WELL AS THE GEOTECHNICAL ENGINEERING REPORT FOR VOYAGER 2, 3 AND 4 WIND PROJECT BY RRC DATED AUGUST 17, 2017.
- 2. ALL DESIGN ELEVATIONS SHOWN ARE TO FINISHED GRADE WITH THE EXCEPTION OF THE SUBSTATION FENCED AREA. THE FENCED AREA IS SHOWN TO SUBGRADE WITH THE FINAL ROCK LAYER PLACED ON TOP OF THE ELEVATIONS SHOWN.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GRADING THE PADS WITHIN 0.1 FOOT OF ELEVATIONS SHOWN CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS BEFORE START OF CONSTRUCTION.
- 4. THE EXISTING ELEVATIONS AND CONTOURS SHOWN ON THESE CONSTRUCTION DRAWINGS WERE PREPARED FROM A TOPOGRAPHIC FIELD SURVEY PREPARED BY SMITHCO DATED AUGUST 2017.
- 5. THE CONTRACTOR SHALL NOTIFY CALIFORNIA 811 AT LEAST 48 HOURS BEFORE EXCAVATION ACTIVITIES COMMENCE.
- 6. THE CONTRACTOR SHALL EXERCISE SUFFICIENT SUPERVISORY CONTROL DURING GRADING AND CONSTRUCTION TO ENSURE COMPLIANCE WITH THE APPROVED PLANS.
- 7. CONTRACTOR SHALL NOTIFY THE GRADING INSPECTOR PRIOR TO INITIATING WORK. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL UNLESS THE SOILS ENGINEER OR GEOLOGICAL ENGINEER, OR BOTH, INVESTIGATE THE SITE AND PROVIDE AN OPINION THAT A CUT AT A STEEPER SLOPE WILL BE STABLE AND NOT CREATE A HAZARD TO PUBLIC OR PRIVATE PROPERTY. CODE OF BUILDING REGULATIONS SECTION 17.28.100-B.
- 8. FILL SLOPES SHALL NOT BE CONSTRUCTED ON NATURAL SLOPES STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL. CODE OF BUILDING REGULATIONS SECTION 17.28.110-B.
- 9. FILL AREA SLOPING STEEPER THAN 5 HORIZONTAL TO 1 VERTICAL SHALL BE KEYED AND BENCHED TO SUPPORT FILL. CODE OF BUILDING REGULATIONS SECTION 17.28-110-C. STEEPER SLOPES MAY BE ALLOWED ONLY IF GEOTECHNICAL ENGINEER COMPLETES A SLOPE STABILITY ANALYSIS.
- 10. ALL FILL AREAS SHALL BE CLEARED OF VEGETATION AND OTHER UNSUITABLE MATERIAL FOR A STRUCTURAL FILL AND THE AREAS SCARIFIED TO A DEPTH OF SIX INCHES. DETRIMENTAL AMOUNTS OF ORGANIC MATERIAL SHALL NOT BE PERMITTED IN FILLS. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL WITH A MINIMUM DIMENSION GREATER THAN 12 INCHES SHALL BE BURIED OR PLACED IN FILLS. CODE OF BUILDING REGULATIONS SECTION 17.28.110-D.
- 11. BERMS OR DRAINAGE DEVICES SHALL BE PLACED AT THE TOP OF ALL FILL SLOPES. DRAINAGE AND TERRACING SHALL BE PROVIDED PER CODE OF BUILDING REGULATIONS 17.28.130.
- 12. SURFACE DRAINAGE SHALL HAVE A DRAINAGE GRADIENT OF 2 PERCENT TOWARD APPROVED DRAINAGE FACILITIES, UNLESS WAIVED BY THE BUILDING OFFICIAL PER SECTION 17.28.130-D.
- 13. EROSION WILL BE CONTROLLED BY PLANTING, CHECK DAMS, CRIBBING, RIPRAP, OR OTHER METHODS AS DESCRIBED IN THE STORMWATER POLLUTION PREVETION PLAN. (CODE OF BUILDING REGULATIONS SECTION 17.28.140-B.)
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK TO BE PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND IN CONFORMANCE WITH THE PROVISIONS OF THE CODE OF BUILDING REGULATIONS. THE CONTRACTOR SHALL ENGAGE CONSULTANTS, IF REQUIRED, TO PROVIDE PROFESSIONAL INSPECTIONS ON A TIMELY BASIS. IN THE EVENT OF CHANGED CONDITIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMING THE BUILDING OFFICIAL OF SUCH CHANGE AND SHALL PROVIDE REVISED PLANS FOR APPROVAL. CODE OF BUILDING REGULATIONS 17.28.170-E.
- 15. FILL MATERIALS SHALL BE PLACED IN LAYERS NOT EXCEEDING 12 INCHES IN A LOOSE CONDITION FOR ROADWAY FILLS AND NOT EXCEEDING 8 INCHES IN A LOOSE CONDITION FOR FOUNDATION FILLS AND SHALL BE COMPACTED TO A MINIMUM OF 97 PERCENT DENSITY OF THE MAXIMUM DENSITY AND AT OPTIMUM MOISTURE CONTENT BY APPROVED METHOD AND CERTIFIED BY TESTS AND REPORTS PERFORMED BY A SOILS ENGINEER.
- 16. AFTER ALL WORK, INCLUDING THE INSTALLATION OF DRAINAGE STRUCTURES AND PROTECTION HAS BEEN COMPLETED AND REQUIRED REPORTS HAVE BEEN SUBMITTED, THE CONTRACTOR SHALL REQUEST A ROUGH GRADING INSPECTION FROM THE KERN COUNTY BUILDING DEPARTMENT OR THE ENGINEER OF RECORD.
- 17. I HEREBY CERTIFY THAT THIS PLAN AND SPECIFICATION HAS BEEN PREPARED IN CONFORMANCE WITH CHAPTER 19.88 (HILLSIDE DEVELOPMENT) OF THE KERN COUNTY ZONING ORDINANCE.

CHRISTOPHER J. CARDA, PE LICENSE NO. 75322





EROSION CONTROL NOTES

- 1. ALL GRADING AND CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE PROJECT SWPPP REQUIREMENTS AND RECOMMENDATIONS ESTABLISHED FOR THIS PROJECT. CONTRACTOR MAY ADD ADDITIONAL BMP'S AS REQUIRED TO CONTROL EROSION AND SEDIMENTATION BOTH DURING AND AFTER CONSTRUCTION. REFER TO SWPPP BOOKLET FOR A COMPLETE LIST OF POTENTIAL BMP'S THAT MAY BE IMPLEMENTED.
- 2. GUIDELINES FOR THE IMPLEMENTATION OF THE APPROPRIATE BMP ELEMENTS ARE AS OUTLINED IN THE CALIFORNIA STORMWATER QUALITY ASSOCIATION'S PUBLICATION: "STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK FOR CONSTRUCTION". THIS DOCUMENT IS CONSIDERED TO BE INCLUDED AS AN INTEGRAL PART OF THIS SWPPP AND IS AVAILABLE FOR DOWNLOAD AT WWW.CABMPHANDBOOKS.COM
- 3. CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES AS PLANNED AND SPECIFIED FOLLOWING BEST MANAGEMENT PRACTICES AS OUTLINED BY THE LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD. EROSION CONTROL PLAN SHALL BE IN CONFORMANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL STORMWATER PERMIT. SEE THE ASSOCIATED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR EROSION CONTROL SPECIFICATIONS. UNLESS OTHERWISE NOTED OR MODIFIED HEREIN, ALL SECTIONS OF THE GENERAL CONDITIONS SHALL APPLY.
- 4. EFFORTS SHALL BE MADE TO MINIMIZE SOIL DISTURBANCE TO AREAS OUTSIDE OF THE DISTURBANCE LIMITS.
- 5. THE CONTRACTOR SHALL MAKE ALL EFFORTS TO KEEP ACTIVITIES WITHIN THE AREAS SHOWN ON THE PLANS BUT IT IS UNDERSTOOD THAT SOME ACTIVITIES THAT WILL NOT REQUIRE GRADING OR SOIL DISTURBANCE MAY EXTEND BEYOND THE DEFINED LIMITS.
- 6. RE-SEEDING OF DISTURBED AREAS SHALL CONFORM TO THE SPECIFICATIONS OF THE HABITAT RESTORATION PLAN. EROSION CONTROL BLANKETS OR POLYMER STABILIZED FIBER MATRIX SHALL BE APPLIED ON EXPOSED SLOPES TO CONTROL DUST AND EROSION
- 7. ALL PUBLIC STREETS SHALL BE MAINTAINED FREE OF DUST AND MUD CAUSED BY THE GRADING OPERATIONS.
- 8. TEMPORARY SEEDING WITHIN 14 DAYS AFTER CONSTRUCTION ACTIVITY CEASES ON ANY PARTICULAR AREA, ALL DISTURBED GROUND WHERE THERE WILL NOT BE CONSTRUCTION FOR LONGER THAN 21 DAYS MUST BE SEEDED WITH FAST-GERMINATING TEMPORARY SEED AND PROTECTED WITH MULCH.
- 9. PERMANENT SEEDING ALL AREAS AT FINAL GRADE MUST BE SEEDED WITHIN 14 DAYS AFTER COMPLETION OF THE MAJOR CONSTRUCTION ACTIVITY. EXCEPT FOR SMALL LEVEL SPOTS, SEEDED AREAS SHOULD GENERALLY BE PROTECTED WITH MULCH.
- 10. CONTRACTOR SHALL COMPLY WITH THE EASTERN KERN AIR POLLUTION CONTROL DISTRICT FUGITIVE DUST CONTROL PLAN (RULE 402). PREVENTATIVE MEASURES TO BE TAKEN BY THE CONTRACTOR SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
- A. WATER SHALL BE APPLIED TO ALL UNPAVED AREAS AS REQUIRED TO PREVENT THE SURFACES FROM BECOMING DRY ENOUGH TO PERMIT DUST FORMATION.
- B. PAVED SURFACES OVER WHICH VEHICULAR TRAFFIC IS PERMITTED TO TRAVEL SHALL BE KEPT FREE OF DIRT.

<u>BMPS</u>

THE FOLLOWING IS A LIST OF ANTICIPATED BMPS, OTHERS MAY BE USED AS NEEDED OR RECOMMENDED BY THE SITE SWPPP COMPLIANCE PERSONNEL. ADDITIONAL BMPS MAY REQUIRED AS PRESCRIBED BY THE PROJECT SWPPP. REFER TO CALIFORNIA STORMWATER BMP HANDBOOK FOR ADDITIONAL INFORMATION.

- EC-3
- EC-4EC-7
- EC-10
- EC-15SE-5
- TC-1
- TC-2
- GD08



STABILIZED CONSTRUCTION ROADWAY - BMP FOR ACCESS ROAD CONSTRUCTION AND MAINTENANCE. USE AS NEEDED IN AREAS WHERE EROSION AND SEDIMENT IS A PROBLEM AND IS IN THE VICINITY OF EXISTING DRAINAGE WAYS.

Westwoo

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TRUCKS FOR LOW VOLUME USE IN NORMAL OPERATING CONDITIONS. THE ROAD DESIGN SPECIFIED IS NOT INTENDED FOR ALL WEATHER USE FOR HEAVY DUTY, HIGH VOLUME, CONSTRUCTION LOADS.

ROAD MAINTENANCE CAN BE EXPECTED DURING CONSTRUCTION AND OVER THE LIFE OF THE PERMANENT FACILITY. 3. ROAD SECTION AND SPECIFICATION SHOWN ON THE PLANS WERE PREPARED BY WESTWOOD PROFESSIONAL SERVICES.

ACCESS ROAD AGGREGATE SHALL MEET CALTRANS SPECIFICATIONS FOR GRADED AGGREGATE BASE COURSE.

2. GEOTEXTILE FABRIC SHALL BE MIRAFI HP270 OR APPROVED EQUAL (IF USED).

EXECUTION

PRODUCTS

- SITE PREPARATION
- A. THE CONTRACTOR SHALL BE REQUIRED TO CLEAR AND GRUB AREAS DESIGNATED ON THE PLANS REMOVING ALL TREES, STUMPS, BRUSH AND DEBRIS. TREES AND BRUSH LOCATED OUTSIDE OF THE PROJECT DEVELOPMENT AREA SHALL NOT BE DISTURBED.
- B. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION TO THE MAXIMUM EXTENT PRACTICABLE. ANY VEGETATION THAT IS REMOVED SHALL ONLY BE ALLOWED WITHIN THE PROJECT BOUNDARY. THE CONTRACTOR IS TO REMOVE ONLY THAT VEGETATION WHICH SHALL BE DESIGNATED BY THE OWNERS REPRESENTATIVE FOR REMOVAL, AND SHALL EXERCISE EXTREME CARE AROUND EXISTING VEGETATION TO BE SAVED. CONSTRUCTION FENCING MAY BE INSTALLED TO PROTECT AREAS THAT ARE NOT TO BE
- C. NO BURNING OF DEBRIS IS ALLOWED WITHOUT THE NECESSARY PERMITS FROM JURISDICTIONAL GOVERNING AUTHORITIES AND APPROVAL BY THE OWNER.
- FILL MATERIALS AND PLACEMENT
- A. ALL FILL MATERIALS SHALL BE INORGANIC SOILS FREE OF VEGETATION, DEBRIS, AND FRAGMENTS LARGER THAN THREE (3) INCHES IN SIZE. PEA GRAVEL OR OTHER SIMILAR NON-CEMENTITIOUS, POORLY-GRADED MATERIALS SHALL NOT BE USED AS FILL OR BACKFILL WITHOUT THE PRIOR APPROVAL OF THE GEOTECHNICAL ENGINEER.
- B. CLEAN ON-SITE SOILS OR APPROVED IMPORTED MATERIAL MAY BE USED AS FILL MATERIAL FOR GENERAL SITE GRADING.THIS
- MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 9". C. ANY IMPORTED SOILS MUST HAVE EXPANSION VALUES IN THE "VERY LOW" RANGE (IF REQUIRED).

ACCESS ROAD CONSTRUCTION AND SITE GRADING

- TOPSOIL MANAGEMENT
- A. TOPSOIL SHALL BE STRIPPED FROM ALL ROADWAY AREAS (TYPICALLY 6"). TOPSOIL STRIPPING AREAS SHALL BE STRIPPED THROUGH THE TOPSOIL DEPTH. TOPSOIL SHALL NOT BE STRIPPED OUTSIDE OF THESE DESIGNATED AREAS.
- B. STRIPPED MATERIALS CONSISTING OF VEGETATION AND ORGANIC MATERIALS SHALL BE STOCKPILED ON THE SITE AWAY FROM NATIVE EXCAVATED SOIL. STOCKPILES WITHIN THE SITE SHALL HAVE TEMPORARY EROSION AND SEDIMENT CONTROL APPLIED IN ACCORDANCE WITH THE PROJECT SWPPP OR USED TO REVEGETATE LANDSCAPED AREAS OR EXPOSED SLOPES AFTER COMPLETION OF GRADING OPERATIONS. IF IT IS NECESSARY TO DISPOSE OF ORGANIC MATERIALS ON-SITE THEY MAY BE USED AS FILL IN NON-STRUCTURAL AREAS OUTSIDE OF THE PROPOSED FACILITIES AREA WHERE SOIL STRENGTH AND COMPRESSIBILITY WOULD NOT IMPACT SITE INFRASTRUCTURE.
- **EMBANKMENTS**
- A. EMBANKMENT CONSTRUCTION SHALL CONSIST OF THE PLACING OF SUITABLE FILL MATERIAL, AFTER TOPSOIL STRIPPING, ABOVE THE EXISTING GRADE AS INDICATED ON CIVIL PLANS. GENERALLY, EMBANKMENT SHALL HAVE COMPACTED SUPPORT SLOPES OF THREE FEET HORIZONTAL TO ONE FOOT VERTICAL
- B. SLOPES GREATER THAN 5 FEET IN HEIGHT SHALL BE BENCHED INTO THE EXISTING SLOPE TO PREVENT MOVEMENT BETWEEN THE FILL
- AND NATIVE SOILS (SEE GEOTECHNICAL REPORT, SECTION 5.2.6). C. THE MATERIAL FOR EMBANKMENT CONSTRUCTION SHALL BE GENERATED ON SITE BY THE CONTRACTOR FROM THE CUT AREA. THIS

-4" COARSE AGGREGATE

GEOTEXTILE (AS NEEDED)

- COMPACTED SUBGRADE

LAYDOWN & PAD AREAS

MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 9". D. ALL SLOPES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GRADING SHOWN ON THE PLANS.

3" CLASS II AGGREGATE BASE;

2" CAP ADDED

ACCESS ROAD

WET PERIODS, OR IN LOW/WET AREAS.

NEEDED BY SITE CONDITIONS.

TO ACHIEVE COMPACTION REQUIREMENTS.

POST-CONSTRUCTION

GEOTEXTILE (AS NEEDED)

COMPACTED SUBGRADE

E. EXPOSED SURFACES SHALL BE FREE OF MOUNDS AND DEPRESSIONS WHICH COULD PREVENT UNIFORM COMPACTION. SEE TABLE 1

1. STRUCTURAL SECTIONS SHOWN ARE THE MINIMUM THICKNESS REQUIREMENTS DURING NORMAL FIELD

CONDITIONS. THE SECTIONS MAY NEED TO BE INCREASED BASED ON ACTUAL FIELD CONDITIONS AT THE TIME

OF CONSTRUCTION. CONDITIONS INCLUDE BUT ARE NOT LIMITED TO CONSTRUCTION DURING UNUSUALLY

IF THE ROAD SUBGRADE IS SOFT OR MUDDY, THE SUBGRADE SHALL BE SCARIFIED, DRIED AND RECOMPACTED.

ADDITIONAL AGGREGATE MAY BE ADDED FOR STABILITY OR A GEOTEXTILE FABRIC SHALL BE USED FOR

IF THE ROAD SUBGRADE REMAINS SOFT FOLLOWING SCARIFICATION, DRYING AND RECOMPACTION EFFORTS

STABILITY OR STRENGTH. SEE SPECIFICATIONS NOTES FOR FABRIC TYPE. FABRIC TO ONLY BE INCLUDED AS

Roadway Structural Sections

- FOR TESTING REQUIREMENTS AND TABLE 2 FOR COMPACTION REQUIREMENTS.
- A. SUBSEQUENT TO THE SURFACE CLEARING, GRUBBING AND TOPSOIL REMOVAL IN AREAS SHOWN ON THE PLANS, THE SUBSURFACE SOILS SHALL HAVE THE GRADES AND ELEVATIONS MODIFIED AS SHOWN ON THE PLANS. THE PROPOSED CONTOURS AND ELEVATIONS SHOWN ON THE PLANS ARE TO TOP OF SUBGRADE WITHIN THE FENCED AREA AND TOP OF AGGREGATE BASE COURSE FOR THE ACCESS ROAD.
- B. SUBSURFACE SOILS SHALL BE MOISTURE CONDITIONED AND COMPACTED TO THE SPECIFICATIONS OF TABLE 2.
- C. ANY CUT MATERIAL THAT CANNOT BE USED FOR STRUCTURAL BACKFILL THROUGHOUT THE PROJECT SHALL BE USED IN FILL AREAS IDENTIFIED ON THE PLANS. THE FILL AREA SHALL HAVE TOPSOIL REMOVED AND MANAGED AS IDENTIFIED ABOVE IN "TOPSOIL MANAGEMENT"
- D. CLEAN, ORGANIC FREE, ON-SITE SOILS OR APPROVED IMPORTED MATERIAL MAY BE USED AS SUBGRADE MATERIAL FOR GENERAL SITE GRADING.
- 3. SUBGRADE PREPARATION
- A. SUBSEQUENT TO THE SURFACE CLEARING, GRUBBING, TOPSOIL REMOVAL AND EMBANKMENT CONSTRUCTION, THE EXPOSED SUBGRADE SOILS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF NINE (9) INCHES, MOISTURE CONDITIONED AND COMPACTED TO THE SPECIFICATIONS OF TABLE 2. THE COMPACTED EXPOSED SUBGRADES SHALL BE PROOF ROLLED AND OBSERVED BY A GEOTECHNICAL ENGINEER TO DETERMINE IF SOFT SOILS EXIST. IF SOFT SOILS EXIST THEY SHALL BE SCARIFIED AND ALLOWED TO DRY, RECOMPACTED AND TESTED AGAIN, IF THEY CONTINUE TO REMAIN SOFT, FOLLOWING SCARIFICATION, DRYING AND RECOMPACTION EFFORTS ADDITIONAL AGGREGATE MAY BE ADDED FOR STABILITY.
- B. ROAD SUBGRADE AND COMPACTION SHALL EXTEND HORIZONTALLY AT LEAST TWO FEET BEYOND THE OUTSIDE EDGE OF THE
- C. THE MOISTURE CONTENT AND COMPACTION OF ROAD SUBGRADE SOILS SHALL BE MAINTAINED UNTIL PAVEMENT CONSTRUCTION. D. CLEAN, ORGANIC FREE, ON-SITE SOILS OR APPROVED IMPORTED MATERIAL MAY BE USED AS SUBGRADE MATERIAL FOR GENERAL SITE
- GRADING AND ROADWAY AREAS. 4. AGGREGATE PLACEMENT A. ACCESS ROADS - SUBSEQUENT TO THE SUBGRADE PREPARATION THE ROAD AGGREGATE BASE SHALL BE PLACED AND COMPACTED
- TO THE SPECIFICATIONS IDENTIFIED IN TABLE 2. TOPSOIL REDISTRIBUTION AND STABILIZATION A. FOLLOWING THE PLACEMENT OF THE AGGREGATE BASE AND APPROVAL OF THE TESTING, TOPSOIL SHALL BE DISTRIBUTED OVER THE
- EXPOSED DISTURBED AREAS, EXCLUDING THE AGGREGATE DRIVING SURFACE. B. FOLLOWING SITE GRADING OPERATIONS, TOPSOIL CAN BE USED TO BRING THE GROUND ELEVATIONS UP TO THE DESIGNED FINISHED
- GRADE ELEVATIONS. C. THE TOPSOIL SHALL HAVE TEMPORARY AND PERMANENT STABILIZATION MEASURES ESTABLISHED IN ACCORDANCE WITH THE
- PROJECT SWPPP.

TEMPORARY LAYDOWN/STORAGE YARD

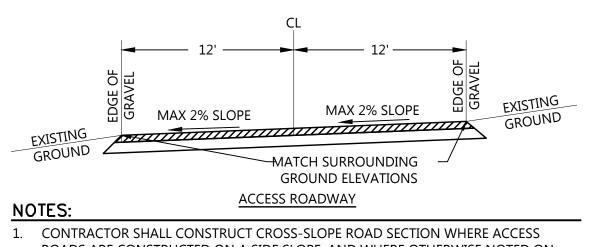
- PREPARATION
- A. THE LAYDOWN/STORAGE YARD SHALL CONSIST OF COMPACTED NATIVE MATERIAL OVERLAID WITH A GEOTEXTILE FABRIC (OPTIONAL) AND AGGREGATE MATERIAL
- B. THE COMPACTED NATIVE MATERIAL SHALL BE MOISTURE CONDITIONED AND COMPACTED TO THE SPECIFICATIONS OF TABLE 2
- (NON-STRUCTURAL AREA).
- C. GEOTEXTILE FABRIC SHALL BE PLACED ON TOP OF COMPACTED NATIVE MATERIAL AND THEN AGGREGATE PLACED AND COMPACTED. D. FOLLOWING CONSTRUCTION AND REMOVAL OF PROJECT INVENTORY THE COMPACTED NATIVE MATERIAL SHALL BE DECOMPACTED

ELECTRICAL TRENCHES (BY OTHERS)

TRENCH'S SHALL BE EXCAVATED TO THE DEPTH IDENTIFIED IN THE ELECTRICAL DRAWINGS/DETAILS (BY OTHERS).

AND PERMANENTLY STABILIZED IN ACCORDANCE WITH THE PROJECT SWPPP SPECIFICATIONS.

- TRENCH BACKFILL SHALL CONSIST OF APPROVED ONSITE OR IMPORT SOILS OR FLOW FILL. SOILS SHALL BE FREE OF VEGETATION, DEBRIS, AND FRAGMENTS LARGER THAN 3/8 INCHES, AS REQUIRED BY ELECTRICAL DRAWINGS/DETAILS (BY OTHERS). A. ELASTIC SILT IS NOT RECOMMENDED FOR TRENCH BACKFILL.
- BACKFILL SHALL BE COMPACTED TO THE GREATER OF 90% OF MAXIMUM DRY DENSITY IN NON-STRUCTURAL AREAS OR TO THE
- MINIMUM SHOWN IN TABLE 2 BELOW FOR OTHER FILLED AREAS. 4. TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED.



ROADS ARE CONSTRUCTED ON A SIDE SLOPE, AND WHERE OTHERWISE NOTED ON PLANS, TO ENSURE THAT ROADS AND SHOULDERS REMAIN WELL DRAINED AT ALL



TABLE 1: TESTING SCHEDULE SUMMARY				
LOCATION	TEST	FREQUENCY		
STRUCTURAL FILL	GRAIN SIZE ANALYSIS, MOISTURE CONTENT, ATTERBERG LIMITS ON FINES CONTENT, AND PROCTOR	1 PER MAJOR SOIL TYPE		
COMPACTED SUBGRADE (ROAD AND PAD)	MOISTURE DENSITY TEST (NUCLEAR DENSITY)	1		
	PROOF-ROLL	ENTIRE ROAD LENGTH AND PAD		
	DYNAMIC CONE PENTROMETER TEST (DCP)	1		
AGGREGATE BASE	MOISTURE DENSITY TEST (NUCLEAR DENSITY)	1		
	PROOF-ROLL	ENTIRE LENGTH		
	SIEVE ANALYSIS	1		
MISCELLANEOUS FILL:	MOISTURE DENSITY TEST (NUCLEAR DENSITY)	1 PER 2 FOOT VERTICAL LIFTS AND/OR 500 C.Y. OF MATERIAL		
TRENCH BACKFILL:	MOISTURE DENSITY TEST (NUCLEAR DENSITY)	1 EVERY 100 LF OF TRENCH, ALTERNATE TEST DEPTHS OF 18" AND AT GRADE		

TABLE 2: COMPACTION AND MOISTURE CONTENT REQUIREMENTS

MATERIAL TYPE AND LOCATION	MINIMUM STANDARD PROCTOR COMPACTION REQUIREMENT (%)	RANGE OF MOISTURE CONTENTS FOR COMPACTION (% OVER OPTIMUM)	
		MINIMUM	MAXIMUM
AGGREGATE BASE	98		
STRUCTURAL FILL (BENEATH SLABS AND FOUNDATIONS)	98	-3%	+3%
STRUCTURAL FILL (GRADING & AROUND FOUNDATIONS)	95	-3%	+3%
SUBGRADE (BENEATH EQUIPMENT PADS, NATIVE MATERIAL)	95	-3%	+3%
SUBGRADE (BENEATH EQUIPMENT PADS, IMPORT NON-EXPANSIVE SOILS)	95	-3%	+3%
TRENCH BACKFILL (NON-STRUCTURAL AREAS)	90		
TRENCH BACKFILL (STRUCTURAL AREAS)	90		
NON-STRUCTURAL FILL	90		

TESTING REQUIREMENTS

- 1. THE CONTRACTOR SHALL SUBMIT MATERIAL TESTING REPORTS AS SHOWN ON THE DRAWINGS
- AS WELL AS GEOTEXTILE MATERIAL TO BE USED DURING CONSTRUCTION. TESTING SHALL BE PERFORMED BY A DESIGNATED INDEPENDENT TESTING AGENCY.
- SUBMIT TESTING AND INSPECTION RECORDS SPECIFIED TO THE CIVIL ENGINEER OF RECORD FOR
- A. THE ENGINEER WILL REVIEW THE TESTING AND INSPECTION RECORDS TO CHECK CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS. THE ENGINEER'S REVIEW DOES
- NOT RELIEVE THE CONSTRUCTION CONTRACTOR FROM THE RESPONSIBILITY FOR CORRECTING DEFECTIVE WORK. PROOF ROLLING SHALL BE PERFORMED IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER OR QUALIFIED GEOTECHNICAL REPRESENTATIVE USING A FULLY LOADED TANDEM OR TRI-AXLE TRUCK WITH A MINIMUM GROSS WEIGHT OF 25 TONS AND MINIMUM AXLE LOADING OF 10 TONS. PROOF-ROLLING ACCEPTANCE STANDARDS INCLUDE NO RUTTING GREATER THAN 1.5
- INCHES, AND NO "PUMPING" OF THE SOIL BEHIND THE LOADED TRUCK. SIEVE ANALYSIS SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM C136
- PROCTORS SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D698 ATTERBERG LIMITS SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D4318
- MOISTURE DENSITY (NUCLEAR DENSITY) TESTING SHALL BE DONE IN ACCORDANCE WITH ASTM
- DYNAMIC CONE PENETROMETER (DCP) TESTING SHALL BE DONE IN ACCORDANCE WITH ASTM

REQUIREMENTS

- A. REFER TO TABLE 1 AND 2 FOR COMPACTION REQUIREMENTS AND ACCEPTABLE MOISTURE
- CONTENTS. IMPORT FILL MATERIAL
- A. IMPORT SOILS USED AS FILL MATERIAL SHALL BE TESTED FOR GRAIN SIZE ANALYSIS, MOISTUR CONTENT, ATTERBERG LIMITS ON FINES CONTENT, PROCTOR TESTS, R-VALUES, SAND EQUIVALENTS, DURABILITY INDEX, LIQUID LIMIT, PLASTICITY INDEX, AND MAXIMUM EXPANSION INDEX.
- COMPACTED SUBGRADE:
- A. THE ENTIRE INTERNAL/ACCESS ROAD SUBGRADE SHALL BE PROOF-ROLLED PRIOR TO THE PLACEMENT OF THE AGGREGATE BASE TO IDENTIFY AREAS OF UNSTABLE SUBGRADE. IF UNSTABLE SUBGRADE IS ENCOUNTERED, SCARIFY, MOISTURE CONDITION, AND RECOMPACT SOILS TO ACHIEVE COMPACTION.
- AGGREGATE BASE:
- A. AGGREGATE BASE SHALL BE PROOF-ROLLED OVER THE ENTIRE LENGTH. IF PROOF ROLLING DETERMINES THAT THE ROAD IS UNSTABLE, ADDITIONAL AGGREGATE SHALL BE ADDED UNTIL THE UNSTABLE SECTION IS ABLE TO PASS A PROOF ROLL FOR ALL ROAD CLASSIFICATIONS.

GENERAL NOTES

- CONSTRUCTION PLANS ARE BASED OFF THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, NAD83, ZONE VI, US FOOT.
- 2. THE ALTA AND GROUND TOPOGRAPHIC SURVEYS WERE PROVIDED BY SMITHCO SURVEYING ENGINEERING.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE OWNER SHALL BE NOTIFIED AND ARE NOT TO BE REMOVED WITHOUT PERMISSION FROM THE OWNER. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- 4. ALL CONSTRUCTION PERFORMED SHALL CONFORM WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF SAN DIEGO COUNTY. WHERE DISCREPANCIES EXIST BETWEEN THE PROJECT SPECIFICATIONS AND THE COUNTY SPECIFICATIONS OR STANDARDS, THE CONTRACTOR SHALL ABIDE BY THE GREATER OR MORE RESTRICTIVE REQUIREMENTS.

5. THE CONTRACTOR SHALL NOTIFY CALIFORNIA 811 (ONE CALL) AT LEAST 48 HOURS BEFORE

- **EXCAVATION ACTIVITIES COMMENCE.**
- 6. ELECTRONIC FILES ARE AVAILABLE FOR CONSTRUCTION OPERATIONS.

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REVISIONS: # DATE COMMENT A 04/24/20 Issued for Drainage Review B 04/30/20 For SWQMP Submittal

C 06/08/20 Issued to Address County Review Comments

Valley Center Storage Project

San Diego County, California

Notes

Not For Construction

DATE: 06/08/2020